Poster Presentation (PF-23)

Canine Pancytopenia with Normocytic-Normochromic Anemia: Case Reports in Three Dogs [2016-2017]

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INTRODUCTION

Canine pancytopenia is a disease that occurs in dogs caused by a decrease in the number of erythrocytes, leukocytes and thrombocytes/platelets in the blood. Canine pancytopenia often attacks dogs that live in the tropic climates. The diseases can be caused by an agent infection, excessive cell proliferation and through an immune intermediary. A decreasing in the number of erythrocytes followed by a decreasing of hemoglobin and hematocrit causes anemic condition. Non-regenerative anemia that often occurs when pancytopenia is normocytic-normochromic anemia [1].

OBJECTIVES

To identify canine pancytopenia with normocytic-normochromic anemia, and to evaluate clinical studies, treatment, and survival of dogs.

RESULT AND DISCUSSION

The clinical study, hematology analysis and therapy of three dogs were identified with the diagnosis of canine pancytopenia and normocytic-normochromic anemia could be shown in the Table 1. There were one dog (< 1 years old) and two dogs (1-3 years old). There were one dog male and two dogs female. All breed of dogs were three shepherd dogs (two German and one Belgian).

Table 1 Clinical study (Signalement) of three dogs

Parameters	**Case 1**	**Case 2**	**Case 3**	**Average**
Breeds	German Shepherd (Herder)	German Shepherd (Herder)	Belgian Shepherd (Malinoise)	
Sex	Male	Female	Female	
Age	6 month	27 month	22 month	18,33 month

The three dogs in this case study had lower blood cell values (leucocytes, erythrocytes and platelets) (Table 2). The average of leucocytes was 2,49 10^3 /µL (from normal 6-17 10^3 /µL), erythrocytes was 3,52 10^6 /µL (from normal 5,5-8,5 10^6 /µL), and thrombocytes was 10,67 10^3 /µL (from normal 200-500 10^3 /µL). A decreasing of kind of all blood cells in the dog is called canine pancytopenia. Erythrocytes Index shown the kinds of anemia, all of dogs shown a normocytic-normochromic anemia. The normocytic-normochromic anemia was a non-regenerative anemia in the dogs [2].

Table 2 Hematology/blood count and citology analysis of three dogs

Parameters	**Unit**	**Normal ranges**	**Case 1**	**Case 2**	**Case 3**	**Average**
Blood smear (for blood parasites)			Negative	Negative	Negative	
Leucocytes	**10^3/µL**	**6 – 17**	**2,05**	**3,30**	**2,12**	**2,49**
Erithrocytes	**10^6/µL**	**5.50 - 8.50**	**1,15**	**4,93**	**4,48**	**3,52**
Hemoglobin	g/dL	12.0-18.0	2,7	9,8	9,2	7,23
Hematocrit/Packed Cell Volume (PCV)	%	37.0-55.0	8,1	31,3	28,01	22,47

Mean Corpuscular Volume (MCV)	fL	60.0-77.0	70,4	64	63	65,8
Mean Corpuscular Hemoglobin Concentration (MCHC)	g/dL	32.0-36.0	33,33	31,8	32,9	32,67
The kind of anemia			**Normocytic Normochromic**	**Normocytic Normochromic**	**Normocytic Normochromic**	**Normocytic Normochromic**
Thrombocytes/Platelets	**$10^3/\mu L$**	**200-500**	**6**	**15**	**11**	**10,67**

Antibiotic therapy (Table 3) that given in three dogs from the kind of Cephalosporin. There were Ceftriaxone®, Clyndamycin® and Doxycyclin®. The therapies associated with survival, 66,67% (two German Shepherd dogs) survived and 33,33% (one Belgian Shepherd dog) died.

Table 3 Therapy and survival of three dogs

Parameters	Case 1	Case 2	Case 3
Antibiotic Therapy	Ceftriaxone®	Clyndamycin®	Doxycyclin®
Survival	Survive	Survive	No survive

CONCLUSION

Three Shepherd dogs in this study had a diagnosis of canine pancytopenia and normocytic anemia. The therapies with the kinds of cephalosporin antibiotic associated with survival, 66,67% survived and 33,33% died.

ACKNOWLEDGMENTS

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